

WHAT IS CLAIMED IS:

1. An axial flux motor having a longitudinal axis and comprising a cylindrically shaped stator member having external and internal surfaces, said external surface having first and second spaced notch portions for receiving first and second coils, respectively, positioned therein, said internal surface having first and second corrugations formed along said longitudinal axis and a first annular groove positioned between said first and second corrugations; and

a first rotor disk positioned within said cylindrically shaped stator member, said first rotor disk being aligned with said first coil, said first rotor disk having a first set of a plurality of magnets formed around the circumference thereof, said magnets passing within said first annular groove when said rotor is rotated with respect to said stator.

2. The axial flux motor of claim 1 further including a second rotor disk positioned within said cylindrically shaped stator member, said second rotor disk being aligned with said second coil, said second rotor disk having a second set of a plurality of magnets, said internal surface of said stator member having a second annular groove, said second set of magnets passing within said second annular groove when said second rotor is rotated with respect to said stator.

3. The axial motor of claim 2 wherein said first and second disk rotors are adjacent to each other, said first set of plurality of magnets being arranged such that magnets are opposed in polarity about the circumference of said first rotor disk and said second set of

plurality of magnets being arranged such that the magnets are opposed in polarity about the circumference of said second rotor disk.

4. The axial motor of claim 3 wherein a magnet on the circumference of said first rotor disk has a first polarity is positioned adjacent a magnet on the circumference of said second rotor disk having said first polarity.

5. The axial motor of claim 4 wherein the intersection of said first corrugation and said first annular groove forms a pole face.

6. The axial motor of claim 5 wherein magnets on said first rotor disk align with said pole face and magnets on said second rotor disk are offset from said first corrugation and said pole face.